

R-5 34.15838 -116.79656

REPLY TO: 3430 Biological Evaluations

December 17, 1979

SUBJECT: Biological Evaluation of Heart Bar Campground

TO: Forest Supervisor, San Bernardino N.F.



A biological evaluation of the Heart Bar campground and adjacent area was conducted on September 18 and 19, 1979 by FIDM entomologist Bruce Roettgering and pathologist John Pronos. This campground was recently acquired by the Forest Service and plans are being made to enlarge and rehabilitate the facility. The purpose of the evaluation was to assess the current status of insects and diseases in the campground and proposed area of expansion.

Observations

Jeffrey pine is the predominant tree species, with only an occasional black oak and white fir present. Tree size, age class, and stand density varies from over-stocked, young, pole-size aggregations to open-grown, mature, large sawtimber.

Forest personnel had previously suspected that three diseases were affecting the Jeffrey pine at Heart Bar. These diseases were dwarf mistletoe, Fomes annosus root disease and Elytroderma deformans needle disease. Our evaluation confirmed the presence of these diseases; however, only the dwarf mistletoe and root disease were judged serious enough to pose a threat to the long-term thrift and survival of individual and aggregated Jeffrey pine. The level of dwarf mistletoe infections varies greatly within different tree aggregations; root disease centers appear to be scattered throughout most of the existing developed campground.

Although no significant current insect activity was detected, root disease and dwarf mistletoe infections, as they influence tree thrift and vigor, do predispose trees and stands to attack by numerous species of bark beetles. In a similar way, over-stocking too increases the probability of attack by bark beetles. Additionally, for the past several years, annual precipitation in the San Bernardino Mountains has been normal to well above normal. Assuming precipitation is one of the more important limiting factors for maintaining tree cover in this near-desert area, and given the observed stocking and disease conditions, if no action is taken to prevent it, bark beetle-caused tree mortality may well be expected to rise sharply following a year or two of below-normal precipitation.

Conclusions and Management Alternatives

We conclude from this evaluation that the dwarf mistletoe, root disease and stocking conditions at Heart Bar are significant, and appropriate pest management alternatives should be considered as plans for rehabilitating and expanding the campground are developed. Those alternatives could include:

1. Dwarf mistletoe control (suppression) to include thinning, broom pruning and removal of infected overstory trees.

FIDM has funds available, for approved projects, to suppress dwarf mistletoes. The procedures for requesting funds are detailed in FSM 3400 (specifically 3453 and 3481). Briefly, if after following the Forest Service NEPA decision-making process a decision for suppression is reached, various documents, including a project proposal (form 3400-2), are sent to the Regional Forester. FIDM people are available to assist in the decision-making process and to help prepare the documents needed for a project proposal.

2. Thinning over-stocked aggregations of Jeffray pine to levels more suitable to the site will maintain or improve tree vigor, leading to increased tree and stand resistance to bark beetles. Worth considering, too, particularly if significant site disturbance such as road and sanitary facility construction is anticipated, is the application of residual bark sprays (to those trees most likely to be affected by the disturbance) to prevent successful bark beetle attack.
3. Although no effective/practical Fomes annosus suppression strategies are available, simply knowing where and how large existing centers are can aid the resource manager in coping with this disease. Given this information, the resource manager may be able to take advantage of or avoid disease centers in the design/layout of the campground. Further, planting of Fomes annosus-resistant oak in existing disease-caused openings and favoring established oaks will lessen the impact of this disease as it spreads and kills Jeffray pine. Certainly, the continued use of the borax stump treatment is appropriate and will decrease the likelihood of new Fomes annosus centers becoming established at Heart Bar.

If you judge that some of these pest management alternatives are viable, we suggest that a more intensive survey be done of the campground and surrounding area. The objectives of such a survey, conducted by FIDM with minimal help from Forest/District personnel, would be to map all tree aggregations, to identify the levels of mistletoe infection in these aggregations, and to identify each root disease center. Assuming the area remains accessible, we could complete this survey in one week's time this winter. And, on completion, we believe you would be better able to integrate appropriate pest management considerations with the overall campground and recreation management plans. Additionally, the information needed for requesting dwarf mistletoe suppression funds would be well in hand.

Let me know if you would like the survey done or if we can provide you with any additional information.

BRUCE H. ROETTINGER

Sp- WILFRED L. FREEMAN, JR., Director
Forest Insect and Disease Management

JProne/crw

2000
BR